REMARKS

Claims 1-27 are all the claims pending in the application. Claims 1-27 have been examined and claims 1-8, 10-17 and 19-26 have been rejected. Specifically, claims 1-5, 10-14 and 19-23 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Wagner et al. (USP 6,002,395); Claims 6-7, 15-16 and 24-25 have been rejected under 35 U.S.C. § 103 as being unpatentable over Wagner et al. in view of Ikemoto (USP 5,969,717); and Claims 8, 17 and 26 have been rejected under 35 U.S.C. § 103 as being unpatentable over Wagner et al. in view of Shimogori (USP 5,973,686). Claims 9, 18 and 27 are objected to but would be allowable if rewritten in independent form.

For the reasons set forth below, Applicant respectfully traverses the rejections and requests favorable disposition of the application.

Argument

Present Invention

The invention to which the present application is directed is a system and method for automatically assigning button labels across one or more displayed pages in response to input quantitatively specifying design constraints and tradeoffs. (Par. [0019] of Published Application No. 2002/0036656). More particularly, the invention is a system and method that provides for the inputting of quantitative data which specifies certain constraints that, for example, an expert human multi-function display (MFD) designer might consider when designing a display interface. Given the certain inputted

data the system is then able to perform certain tasks otherwise performed by the expert MFD designer.

In accordance with one embodiment of the invention, data specifying a geometrical arrangement of two or more buttons for one or more displays is input to the system. Labeling data for the buttons is then input to the system as well as data defining interactions between the labeled buttons. Data is then input that specifies at least one constraint cost with respect to the data that defines the interactions between the labeled buttons and the constraint cost(s) is/are optimized by assigning/reassigning the labels of the buttons.

For example, as disclosed at paragraph [0069] of the published application, the data input with respect to the constraint cost(s) could specify a global-difficulty cost, a pages-to-close-buttons cost, a pages-to-fixed-buttons cost, a path difficulty cost, a pages-to-far buttons cost and a parent-to-child variability cost, etc. Once the data regarding the constraint cost(s) is/are input to the system, an optimization procedure, such as, a gradient descent substantial optimization procedure and a simulated annealing substantial optimization procedure is performed which results in the particular cost being minimized and the button labels being optimized in accordance with the input constraint cost data. Therefore, in accordance with the invention disclosed and claimed in the present application, a non-expert MFD designer is able to design a display interface that automatically optimizes certain predefined constraints. Conventional art design tools such as the ones disclosed in the cited prior art references do not provide

this feature and, alternatively, rely on the expertise of the human designer to reach an optimized solution.

Lack of Recited Elements in the Prior Art

Applicant respectfully submits that the system and method disclosed in Wagner et al. is completely different than that which is disclosed and claimed in the present application. In particular, neither Wagner et al. nor any of the other cited prior art references, alone or in combination, teach or otherwise suggest the method of, or structure for "accepting user input specifying at least one ***constraint cost*** for the defined at least one interaction; and ***assigning the labels*** of the at least two buttons among the two or more buttons on one or more displayed pages ***such that the at least one constraint cost is substantially optimized***", as recited in independent claims 1, 10 and 19.

§102 Rejection

Wagner et al. is directed to a Graphical User Interface (GUI) builder design tool that helps create and modify a graphical interface. The grounds of rejection assert that Wagner et al. teaches accepting input that specifies at least one constraint cost and that this disclosure is found at column 4, lines 11-21 and 36-47. Applicant respectfully disagrees with both of these assertions. In particular, at column 4, lines 11-47, Wagner et al. discloses one or more NICE® (Natural Interface for Computing Environments) object frames for a touch screen display used in a restaurant. For example, as shown in Figs. 3A and 2A, various object definitions are provided for the screen frame "PIZZA". Within the parent, "PIZZA", frame are child frames, "PIZZAS", "SPECIAL PEPPERONI",

SPECIAL DELUX" and "SPECIAL VEGGIE". Neither the definition of the parent frame nor the definition of the child frames, however, constitute specifying a constraint cost for any previously defined interaction between the "buttons" shown on the display. To the contrary, what is disclosed at column 4 of Wagner et al. is merely the location and the appearance of the parent and child frames. No "constraint costs" with respect to the various frames, and any interactions between the various frames, are disclosed or even contemplated in Wagner et al.

Constraint costs, as clearly disclosed in the present specification, refer to those variables that, when optimized, provide for an efficient automatic assignment of labels to the various buttons. (See, e.g., par. [0094] and pars. [0111] - [0119]). For example, when a constraint cost "global difficulty" is optimized, the average difficulty needed to reach certain information is minimized. (Par. [0113]). When a constraint cost "pages to close buttons" is optimized, the system automatically assigns button labels such that related button labels are grouped together on nearby buttons or assigns the same or similar button labels to buttons located at the same place on every page, e.g., the CANCEL button. (Par. [0114]). There is simply no disclosure whatsoever in Wagner et al. of constraint cost data being input to the system or of assigning button labels based on an optimization of the constraint cost(s).

For at least the above reason, Wagner et al. does not anticipate, or otherwise render obvious any of claims 1-27 and the rejection of claims 1-5, 10-14 and 19-23 should be withdrawn.

§103 Rejections

Neither Shimogori nor Ikemoto compensate for the deficiency discussed above with respect to Wagner et al. Specifically, neither Shimogori nor Ikemoto disclose inputting *constraint cost* information to the system or the assignment of button labels based on the optimization of constraint costs, as explicitly required by the claims. Furthermore, the grounds of rejection do assert otherwise. Accordingly, even if the independent teachings of Shimogori and/or Ikemoto were combined with the teachings of Wagner et al., the invention recited in independent claims 1, 10 and 19 would not be disclosed. Therefore, none of claims 1-27 are rendered obvious by the proposed combinations of either Wagner et al. and Shimogori or Wagner et al. and Ikemoto. As a result, the rejections of claims 6-8, 15-17 and 24-26 should be withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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